इंटरनेट मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”
Mazdoor Kisan Shakti Sangathan
“The Right to Information, The Right to Live”

“पुराने को छोड नये के तरफ”
Jawaharlal Nehru
“Step Out From the Old to the New”

IS 326-16 (1989): Methods of sampling and test for natural and synthetic perfumery materials (Part 16) Determination of melting point and melting range [PCD 18: Natural and Synthetic Fragrance Materials]

“ज्ञान से एक नये भारत का निर्माण”
Satyanarayan Gangaram Pitroda
“Invent a New India Using Knowledge”

Act Number 22 of 2005
The Indian Parliament
RIGHT TO INFORMATION

Made Available By
Public.Resource.Org

“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”
Bhartṛhari—Nītiśatakam
“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE

BRUTUM FULMEN

IGNORANTIA JURIS NON EXCUSAT

PROTECTED BY COPYRIGHT

IS 326 (Part 16) : 1989

(Reaffirmed 2002)
Edition 3.1
(1999-03)

भारतीय मानक

प्राकृतिक और संश्लेषित सुगन्ध सामग्री — परीक्षण की पद्धतियाँ

भाग 16 गलनांक और गलन रेंज ज्ञात करना

(दूसरा पुनरीक्षण)

Indian Standard

NATURAL AND SYNTHETIC PERFUMERY MATERIALS — METHODS OF SAMPLING AND TEST

PART 16 DETERMINATION OF MELTING POINT AND MELTING RANGE

(Second Revision)

(Incorporating Amendment No. 1)

UDC 665.572/.574 : 536.421.1

DESCRIPTORS : ESSENTIAL OILS, METHODS OF TEST.

© BIS 2002

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Price Group 1

Natural and Synthetic Perfumery Materials Sectional Committee, PCDC 18

FOREWORD

This Indian Standard (Part 16) (Second Revision) was adopted by the Bureau of Indian Standards on 25 January 1989, after the draft finalized by the Natural and Synthetic Perfumery Materials Sectional Committee had been approved by the Petroleum, Coal and Related products Division Council.

This standard was first published in 1952 entitled 'Methods of test for essential oils' and subsequently revised in 1968 as 'Methods of sampling and test for natural and synthetic perfumery materials'. Taking cognizance of the need to incorporate instrumental methods of analysis now in vogue and to facilitate inclusion of additional test methods or change in the existing test methods and also to align these test methods with those specified in corresponding ISO standards, the Committee decided to revise and split the standard and publish individual test methods as separate parts of the original standard. The test method as given in this part supersedes the test method as given in **16.8** and **16.9** of IS 326 : 1968 'Methods of sampling and test for natural and synthetic perfumery materials (*first revision*)'.

This edition 3.1 incorporates Amendment No. 1 (March 1999). Side bar indicates modification of the text as the result of incorporation of the amendment.

In reporting the result of a test or analysis, made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'.

Indian Standard

NATURAL AND SYNTHETIC PERFUMERY MATERlALS — METHODS OF SAMPLING AND TEST

PART 16 DETERMINATION OF MELTING POINT AND MELTING RANGE

(Second Revision)

1 SCOPE

This standard (Part 16) prescribes method for determination of melting point and melting range of a perfumery material.

2 REFERENCES

The Indian Standard IS 6597 : 1988 'Glossary of terms relating to natural and synthetic perfumery materials (*second revision*)', is a necessary adjunct to this standard.

3 TERMINOLOGY

3.1 For the purpose of this standard, the definitions given in IS 6597 : 1988 shall apply.

3.2 Melting Point

The temperature at which the material melts and becomes liquid throughout as shown by the formation of a definite meniscus is known as the melting point of the material.

3.3 Melting Range

The temperature between which the material collapses against the side of the tube and the temperature at which it is liquid throughout, is known as the melting range of the material.

4 DETERMINATION OF MELTING POINT/MELTING RANGE

4.1 Apparatus

4.1.1 *Capillary Tube,* of soft glass closed at one end, thickness of the wall about 0.10 to 0.15 mm; length, suitable for the apparatus used; and of 0.9 to 1.1 mm internal diameter.

4.1.2 *Thermometer,* of mercury-in-glass, solid stem type; the bulb shall be cylindrical in shape and made of suitable thermometric glass suitable for the range of temperature covered. The thermometer shall have a range and accuracy suitable* for the melting range to be determined. The thermometer shall be calibrated in 0.1 or 0.2°C having 76 mm immersion line.

4.1.3 *Glass Heating Vessel,* of suitable construction and capacity, fitted with a stirring device capable of rapidly mixing the bath liquid.

4.2 Procedure

4.2.1 Spread a small quantity of the finely powdered material in a thin layer and dry at a temperature below its melting point/melting range in an oven, or in a vacuum desiccator over sulphuric acid for 24 hours.

4.2.2 Transfer a quantity of the dried powder to a dry capillary tube and pack the powder by tapping the tube on a hard surface so as to form a tightly packed column of 2 to 4 mm in height. Attach the capillary tube and its contents to the thermometer so that the closed end is at the level of the middle of the bulb, and heat in the heating vessel, regulating the rise of temperature during the first period to 3 deg per minute. When the temperature reached is 10 deg below the expected melting point/melting range, of the material being tested, the heating of the vessel is adjusted so that the rate of rise in temperature is 1 to 2 deg per minute.

4.3 Expression of Results

4.3.1 For melting point, note the temperature reading at which the liquefaction of the material occurs as indicated by the formation of a definite meniscus.

4.3.2 For melting range, note the temperature reading at which the material collapses against the side of the tube, and the temperature at which it is liquid throughout.

NOTE — In case of pure crystalline material mixed melting point technique is very useful. The melting point of the 1:1 mixture of standard material and material under evaluation should be unchanged/undepressed. This is the confirmatory test for the material under test.

---

*For melting range below 100°C, a thermometer of –10 to +110°C range is ideal, while for melting range above 100°C, a thermometer from –10 to +300°C may be used.

Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act*, 1986 to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in the course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designations. Enquiries relating to copyright be addressed to the Director (Publications), BIS.

Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards : Monthly Additions'.

This Indian Standard has been developed from Doc : No. PCDC 18 (934)

Amendments Issued Since Publication

Amend No.	Date of Issue
Amd. No. 1	March 1999

BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002.
Telephones: 323 01 31, 323 33 75, 323 94 02
Telegrams: Manaksanstha
(Common to all offices)

Regional Offices:	Telephone
Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg NEW DELHI 110002	323 76 17 323 38 41
Eastern : 1/14 C. I. T. Scheme VII M, V. I. P. Road, Kankurgachi KOLKATA 700054	337 84 99, 337 85 61 337 86 26, 337 91 20
Northern : SCO 335-336, Sector 34-A, CHANDIGARH 160022	60 38 43 60 20 25
Southern : C. I. T. Campus, IV Cross Road, CHENNAI 600113	235 02 16, 235 04 42 235 15 19, 235 23 15
Western : Manakalaya, E9 MIDC, Marol, Andheri (East) MUMBAI 400093	832 92 95, 832 78 58 832 78 91, 832 78 92

Branches : AHMEDABAD. BANGALORE. BHOPAL. BHUBANESHWAR. COIMBATORE. FARIDABAD. GHAZIABAD. GUWAHATI. HYDERABAD. JAIPUR. KANPUR. LUCKNOW. NAGPUR. NALAGARH. PATNA. PUNE. RAJKOT. THIRUVANANTHAPURAM. VISHAKHAPATNAM.